504688907 12/14/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4735629

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST

CONVEYING PARTY DATA

Name	Execution Date
CLEAVER-BROOKS, INC.	12/11/2017

RECEIVING PARTY DATA

Name:	U.S. BANK NATIONAL ASSOCIATION, AS COLLATERAL AGENT
Street Address:	1555 N. RIVER CENTER DRIVE, SUITE 203
City:	MILWAUKEE
State/Country:	WISCONSIN
Postal Code:	53212

PROPERTY NUMBERS Total: 10

Property Type	Number
Patent Number:	7409301
Patent Number:	9477242
Patent Number:	8899326
Application Number:	13185819
Application Number:	15332470
Application Number:	15138899
Application Number:	14743422
Application Number:	15175987
PCT Number:	US1536451
PCT Number:	US1636247

CORRESPONDENCE DATA

Fax Number:

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: (212) 318-6079

Email: biancalee@paulhastings.com

Correspondent Name: BIANCA LEE

Address Line 1: 200 PARK AVENUE

Address Line 4: NEW YORK, NEW YORK 10166

ATTORNEY DOCKET NUMBER: F174356

PATENT REEL: 044401 FRAME: 0702

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NAME OF SUBMITTER: ALANA GRAMER				
SIGNATURE:	/ALANA GRAMER/			
DATE SIGNED:	12/14/2017			
Total Attachments: 6				
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PATENT SECURITY AGREEMENT

PATENT SECURITY AGREEMENT dated as of December 11, 2017 (this "**Agreement**"), among Cleaver-Brooks, Inc., a Delaware corporation (the "**Grantor**"), and U.S. Bank National Association ("**U.S. Bank**"), as collateral agent (in such capacity, the "**Collateral Agent**").

Reference is made to (a) the Senior Secured Notes Pledge and Security Agreement dated as of the date hereof (as amended, supplemented or otherwise modified from time to time, the "Security Agreement"), among Cleaver-Brooks, Inc., a Delaware corporation (the "Company"), the grantors party thereto and the Collateral Agent, and (b) the Indenture dated as of the date hereof (as amended, restated, supplemented or otherwise modified from time to time, the "Indenture"), among the Company, Cleaver-Holdings, Inc., the other guarantors party thereto and U.S. Bank, as trustee and as collateral agent. Pursuant to the Security Agreement, the Grantor is required to execute and deliver this Agreement. Accordingly, the parties hereto agree as follows:

SECTION 1. <u>Terms</u>. Each capitalized term used but not defined in this Agreement has the meaning given or ascribed to it in the Security Agreement. The rules of construction specified in Article I of the Security Agreement also apply to this Agreement.

SECTION 2. Grant of Security Interest. As security for the payment or performance, as the case may be, in full of the Secured Obligations, the Grantor hereby pledges to the Collateral Agent, its successors and assigns, for the ratable benefit of the Secured Parties, and hereby grants to the Collateral Agent, its successors and assigns, for the ratable benefit of the Secured Parties, a security interest in all right, title or interest in or to any and all of the following assets and properties now owned or at any time hereafter acquired by the Grantor or in which the Grantor now has or at any time in the future may acquire any right, title or interest (collectively, the "Patent Collateral"):

- (a) all patents issued by the United States or the equivalent thereof in any other country, and all applications for patents of the United States or the equivalent thereof in any other country, including issued patents and pending applications in the United States Patent and Trademark Office (or any successor or any similar offices in any other country), including those United States patents and patent applications listed on Schedule I;
- (b) all reissues, continuations, divisions, continuations-in-part, renewals or extensions thereof, and the inventions disclosed or claimed therein, including the right to make, use and/or sell the inventions disclosed or claimed therein ((a) and (b) collectively, the "Patents"); and

[Signature Page to Patent Security Agreement]

(c) all Proceeds and products of any and all of the foregoing, all Supporting Obligations and all collateral security and guarantees given by any Person with respect to any of the foregoing.

SECTION 3. Recordation. This Agreement has been executed and delivered by the Grantor for the purpose of recording the grant of security interest herein with the United States Patent and Trademark Office. The Grantor authorizes and requests that the Commissioner of Patents and Trademarks at the United States Patent and Trademark Office record this Agreement.

SECTION 4. Security Agreement. The security interests granted to the Collateral Agent herein are granted in furtherance, and not in limitation of, the security interests granted to the Collateral Agent pursuant to the Security Agreement. The Grantor hereby acknowledges and affirms that the rights and remedies of the Collateral Agent with respect to the Patent Collateral are more fully set forth in the Security Agreement, the terms and provisions of which are hereby incorporated herein by reference as if fully set forth herein. In the event of any conflict between the terms of this Agreement and the Security Agreement, the terms of the Security Agreement shall govern, and for the avoidance of doubt, Patent Collateral shall not include any Excluded Collateral.

SECTION 5. Counterparts. This Agreement may be executed in counterparts (and by different parties hereto on different counterparts), each of which shall constitute an original but all of which when taken together shall constitute a single contract. Delivery of an executed signature page to this Agreement by facsimile transmission or other electronic transmission (including by .pdf, .tif or similar format) shall be as effective as delivery of a manually signed counterpart of this Agreement.

SECTION 6. Further Assurances. The Grantor further agrees to execute and deliver to the Collateral Agent any and all further documents and instruments, and do any and all further acts which the Collateral Agent (or the Collateral Agent's agents or designees) reasonably requests in order to confirm this grant of security interest in and to the Patent Collateral.

SECTION 7. <u>Applicable Law</u>. THIS AGREEMENT SHALL BE CONSTRUED IN ACCORDANCE WITH AND GOVERNED BY THE LAWS OF THE STATE OF NEW YORK.

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IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement as of the day and year first above written.

CLEAVER-BROOKS, INC.,

as Grantor,

By:

Name: James T. Sprouse

Title: CFO, Secretary and Treasurer

[Signature Page to Patent Security Agreement]

Acknowledged and Agreed by:

U.S. BANK NATIONAL ASSOCIATION, as Collateral Agent

Name: STEVEN F. POSTO
Title: VICE PRESIDENT

REEL: 044401 FRAME: 0707

SCHEDULE I TO PATENT SECURITY AGREEMENT

United States Patents and Patent Applications

Registered and Pending Patents

Patent/ Application Number	Country	<u>Patent</u>	Status	<u>Issue</u> <u>Date/Appl</u> <u>Date</u>	<u>Owner</u>
7,409,301	United States	Boiler water level monitoring and control system	Granted	08/05/08	Cleaver-Brooks, Inc.
9,477,242	United States	System and Method of Controlling Condensing and Non- Condensing Boiler Firing Rates	Granted	10/25/2016	Cleaver-Brooks, Inc.
2,792,823	Canada	System and Method of Controlling Condensing and Non- Condensing Boiler Firing Rates	Pending / Published	10/19/12 / 4/21/2013	Cleaver-Brooks, Inc.
8,899,326	United States	Oil Recovery Process	Granted	12/2/2014	Cleaver-Brooks, Inc.
13/185,819	United States	Forced Circulation Steam Generator	Pending/ Published	7/19/11 / 1/24/2013	Cleaver-Brooks, Inc.
15/332,470	United States	System and Method of Controlling Condensing and Non- Condensing Boiler Firing Rates	Pending / Published	10/24/2016 / 6/15/2017	Cleaver-Brooks, Inc.
15/138,899	United States	Boiler System and Method of Operating Same	Pending/ Published	4/26/2016 / 10/26/2017	Cleaver-Brooks, Inc.
US15/36451	Patent Cooperation Treaty	Reduced Size Fire Tube Boiler System Having Method of Operating	Pending / Published	6/18/2015 / 12/22/2016	Cleaver-Brooks, Inc.

14/743,422	United States	Reduced Size Fire Tube Boiler System Having Method of Operating	Pending / Published	6/18/2015 / 12/22/2016	Cleaver-Brooks, Inc.
US16/36247	Patent Cooperation Treaty	Burner with Adjustable End Cap and Method of Operating Same	Pending	6/7/2016	Cleaver-Brooks, Inc.
15/175,987	United States	Burner with Adjustable End Cap and Method of Operating Same	Pending	6/7/2016	Cleaver-Brooks, Inc.

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RECORDED: 12/14/2017